

## SECTION VI.—WEATHER AND DATA FOR THE MONTH.

### THE WEATHER OF THE MONTH.

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*Pressure.*—The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing directions of the winds, are graphically shown on Chart VII, while the average values for the month at the several stations, with the departures from the normal, are shown in Tables I and III.

For the month as a whole, the mean barometric pressure was above the normal over the greater portion of the country, the plus departures being rather marked in the South Atlantic, Gulf, and Pacific Coast States, but elsewhere they were, as a rule, small. The only districts in which the monthly values were below the normal appear in the region of the Great Lakes, the middle and upper Mississippi and lower Missouri valleys, and in the northern Plateau region, where the means for the month were below the average, though no marked minus departures appeared in any portion of the country.

During the first few days of the month unsettled barometric conditions obtained throughout the country, with no well defined low or high area. About the 4th a depression of some consequence advanced southeastward from the Canadian Northwest and moved eastward along the northern border and down the St. Lawrence Valley during the following few days, but with decreasing intensity.

About the beginning of the second decade another disturbance of moderate intensity moved eastward over the northern border States, and was followed by an area of moderately high pressure which extended southward and covered all eastern districts about the 12th and 13th. From this time to the beginning of the third decade no important pressure changes occurred, but the tendency was to relatively high readings in southern districts and lower pressure to the northward.

After the middle of the third decade a disturbance passed from the Southwest northeastward across the country to the Canadian Maritime Provinces, and the month closed with low pressure over the Plateau region and a depression of marked character advancing southeastward over the valley of the Red River of the North, while relatively high barometric readings obtained over eastern and southern districts.

The distribution of the highs and lows was favorable for the frequent occurrence of southerly winds from the Plains States eastward, while the prevailing directions to the westward were variable.

*Temperature.*—At the beginning of the month there was a general, though not decided, rise in temperature over eastern and southern districts, and warm weather continued in the West and Northwest, the temperatures being abnormally high in portions of the northern Rocky Mountain region and the adjoining Canadian Provinces. Near the close of the first decade relatively high pressure prevailed over the southeastern States and low pressure to the northward, causing southerly winds and high temperatures in the great central valleys and throughout the South. However, within a few days cooler weather advanced rapidly from the Mountain region of the West

over the northern tier of States to New England, but it continued rather warm in southern districts and portions of the West.

About the middle of the month temperatures became high in the far Northwest and the warm area advanced eastward during the following few days, with maximum temperatures near or slightly above 100° in portions of the Dakotas, and at points to the eastward the previous high temperature records for August were equaled or exceeded.

Early in the third decade high pressure moved southward from Canada, and much cooler weather obtained from the Lake region westward, with minimum temperatures near the freezing point along the northern shore of Lake Superior on the morning of the 24th, and with light frost in extreme northern Michigan and at exposed points in Wyoming. During the following few days the cool area moved eastward and southward, giving temperatures below the seasonal average over the larger part of the country, and further frosts occurred in the more northern districts. During the last few days of the month there was a gradual change to warmer weather, except in the far Northwest where the pressure was rising and a decided fall in temperature had set in as the month closed.

The mean temperature for the month as a whole was above the normal in all districts east of the Mississippi River and in the central Plains States. Like temperature conditions obtained for the preceding month over much of these sections, but the departures were somewhat less marked for the month just closed, only a comparatively small area in the central Mississippi Valley showing plus departures as large as 3°. In the upper Mississippi Valley, the northern Plains States, the Rocky Mountain region and in California the means were less than the normal, but, like the plus departures, the values were generally small, reaching 3° only in limited areas. In the far Northwest and in the Southwest the means were near the normal for the month.

*Precipitation.*—During the first few days of the month unsettled, cloudy weather prevailed over much of the country, with local rains in most eastern districts. By the 5th a disturbance that had advanced from the Canadian Northwest had reached the central and northern plains States and showers occurred in that region, extending southward during the following few days over Kansas, Oklahoma, and Texas, the rainfall being particularly heavy in portions of the last-named State, where heavy falls continued for several days. By the close of the first decade the severe drought that had persisted in the Southwest had effectually been broken and quite general showers had occurred over most of the eastern half of the country, save in the Northeastern States and the middle Mississippi Valley.

At the beginning of the second decade showers continued over much of the country east of the Mississippi River, with heavy falls in the lake region and generous amounts in portions of the Ohio Valley where drought had prevailed, and at the same time showers occurred in portions of the plains States and the mountain region of the West. The decade was marked by unsettled weather, but as it advanced showers became less frequent.

During the third decade showery weather was again the rule over most eastern districts, the rainfall becoming more general near the end of the month as a low pressure area moved from the Rio Grande Valley north-eastward across the country to New England, giving substantial to heavy rains over large areas and relieving the drought that had prevailed in the eastern sections of the corn belt.

For the month as a whole the rainfall was heavy, ranging from 6 to 8 inches, or more, in nearly all the Southern States, and generous amounts, ranging from 4 to 6 inches, were received from the middle Mississippi Valley eastward and northeastward to the Atlantic Coast. The monthly totals ranged from 2 to 4 inches over much of the Mountain region of the West and the central and northern Plains States, but in portions of the latter districts the amounts were light, ranging from 1 to 2 inches. No rain occurred during the month in the Pacific Coast States, and at the close drought had become severe in the northern portions.

## GENERAL SUMMARY.

The most noteworthy features of the weather for August, 1914, were the generous amounts of rainfall in large sections of the principal crop-producing areas, thoroughly relieving the drought that had persisted in many localities, and the comparatively equable distribution of temperature over those districts.

The severe drought in the western section of the cotton belt was effectually relieved early in the month; the growing cotton rapidly responded to the favorable change in conditions, and by the end of the month it had recovered more than the previous deterioration from lack of moisture. Likewise the rainfall in the central and eastern portions of the belt was more generous than during the preceding month, and with favorable temperature conditions a general improvement in the condition of cotton and other crops was noted in those districts.

Later in the month good rains were received in large portions of the corn belt, especially in the central Mississippi Valley and to the eastward, which improved the general outlook and benefited the late crop, but in other portions of the belt droughty conditions continued and much early corn was damaged.

In the spring-wheat belt dry, hot weather caused considerable damage early in the month to the growing crop, but later these conditions were favorable for harvesting, and thrashing of the winter-wheat crop was accomplished without material interruption.

Over the great range country of the Southwest sufficient moisture was received to maintain the grass in good condition, but in the far Northwest the drought had become severe at the close of the month and grass and other vegetation were suffering for moisture.

## Average accumulated departures for August, 1914.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
	° F.	° F.	° F.	Ins.	Ins.	Ins.			P. ct.	P. ct.
New England.....	67.2	+0.1	- 9.5	3.26	-0.60	- 2.80	6.2	+1.2	84	+2
Middle Atlantic.....	74.0	+1.4	- 1.1	3.80	-0.60	- 3.40	5.5	+0.4	75	+6
South Atlantic.....	79.0	+1.2	+ 4.2	4.77	-1.40	-10.90	6.2	+1.0	83	+1
Florida Peninsula.....	82.7	+0.7	+ 2.6	3.57	-3.40	-11.70	4.8	-0.4	74	-5
East Gulf.....	79.4	+0.2	+ 3.2	5.98	+1.10	- 5.50	6.2	+1.0	84	+4
West Gulf.....	80.6	-0.4	+ 3.9	5.94	+3.00	- 3.80	6.1	+2.1	80	+5
Ohio Valley and Tennessee.....	75.5	+0.7	+ 2.7	5.19	+1.80	- 5.60	5.5	+1.0	73	+1
Lower Lakes.....	70.1	+0.4	- 6.3	4.66	+1.70	+ 0.20	5.0	+0.4	72	+1
Upper Lakes.....	66.7	+0.4	+ 2.9	3.77	+0.80	+ 1.10	5.1	+0.4	76	+1
North Dakota.....	64.2	-2.6	+11.8	2.25	+0.80	+ 3.20	5.0	+1.0	70	+6
Upper Mississippi Valley.....	74.5	+1.6	+14.0	3.66	+0.40	- 5.20	4.9	+0.7	67	-3
Missouri Valley.....	75.2	+1.4	+18.6	2.75	-0.60	- 3.00	4.2	+0.1	65	-2
Northern slope.....	66.2	-0.6	+15.6	1.54	+0.30	- 1.60	4.3	+0.4	54	+2
Middle slope.....	78.4	+1.1	+16.9	2.40	0.00	- 3.40	4.2	+0.4	63	+4
Southern slope.....	78.3	-0.8	+ 5.7	5.93	+3.80	+ 4.40	4.6	+0.7	68	+7
Southern Plateau.....	77.4	0.0	+ 1.9	0.93	-0.20	- 0.60	2.7	-1.0	47	+5
Middle Plateau.....	72.4	+0.8	+ 9.2	0.50	-0.20	+ 0.20	2.5	-0.8	34	+1
Northern Plateau.....	71.5	+1.2	+18.5	0.02	-0.40	- 0.90	2.6	+0.3	34	-9
North Pacific.....	60.8	-0.2	+13.2	0.20	-0.60	- 0.30	4.3	-0.3	75	+8
Middle Pacific.....	64.6	-0.3	+ 6.4	0.00	0.00	- 0.40	3.5	-0.1	62	-5
South Pacific.....	69.8	-0.7	+13.0	0.00	0.00	+ 3.80	2.8	0.0	66	0

## Maximum wind velocities, August, 1914.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Mi./hr.				Mi./hr.	
Block Island, R. I. . .	17	61	w.	New York, N. Y. . .	21	51	nw.
Buffalo, N. Y. . . . .	10	54	w.	Sandusky, Ohio. . .	23	52	nw.
El Paso, Tex. . . . .	10	55	ne.	Sioux City, Iowa. .	4	52	nw.
Jacksonville, Fla. . .	14	50	sw.	Toledo, Ohio. . . . .	10	54	sw.
Modena, Utah. . . . .	16	50	sw.	Do. . . . .	23	55	nw.